

Florida Department of TRANSPORTATION



Asphalt Sample Instructions

September 19, 2017

Introduction

This document describes the details related to the sample life cycle of hot mix asphalt project samples. It does not cover in-depth sample life cycle instructions. Those can be found in the Project Sample User Manual which uses structural concrete as the example material. This document will describe the differences when processing and asphalt sample.

This document assumes that the user has access to MAC and has the necessary roles for performing the functions described. Users needing access to MAC should review the MAC Access Instructions on the FDOT State Materials Office MAC website. If assistance is needed, you may contact your local MAC District Application Coordinator or a system administrator (FDOT: State Materials Office - MAC Contacts). Or you may submit an FDOT Service Desk Ticket by emailing FDOT.ServiceDesk@dot.state.fl.us and requesting assistance with MAC access.

These instructions go beyond basic functions and provide detailed information about items like sample flags, warning messages, error messages, etc. The training videos (<u>Sample Life Cycle Data Entry and Submit Sample for FDOT Verification - YouTube</u>, <u>Sample Life Cycle FDOT Verification and Comparison Package - YouTube</u>) describe the basic functions without the level of detail and notes found in these instructions. If you prefer a less detailed approach, please review the sample life cycle training videos.

Sample Login



1. From the MAC Main menu select the Manage Samples option.



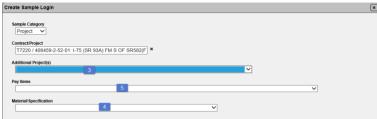
2. Select the Create Sample Login option.

The Create Sample Login dialog box will appear. This dialog box is used for all samples in MAC. As you select additional options, more fields will appear. A (★) indicates a required field.

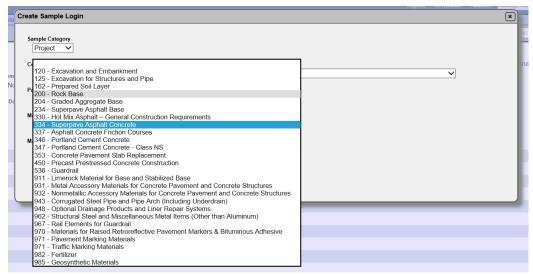


- 1. The Sample Category defaults to project. Leave it as project.
- 2. Enter the Contract or Financial Project Id in the Contract/Project field. The field will search on either entry. From the returned search results, select the appropriate entry or entries. MAC restricts project samples to a single contract. Project samples cannot cross contracts.

After you select the Financial Project Id, more fields will appear on the Create Sample Login screen.



3. If the contract has only one Financial Project Id, the Additional Project(s) field will not display. If the contract has two or more Financial Project Ids, the Additional Project(s) field will display. If the sample represents more than one Financial Project Id, select the other project(s) that the sample represent(s).

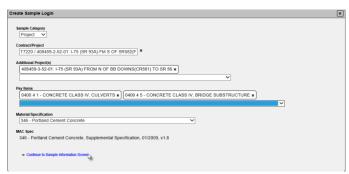


4. You don't have to enter the fields in the order they appear on the screen. The pay item field comes next, but it is better to select the Material/Specification next to reduce the selection of pay items. Select the appropriate Material/Specification from the drop down list.

NOTE: Select MAC Material 234 only when the entire Project is for Asphalt Base and there is no structural asphalt on the contract. If there is structural asphalt, enter all samples under MAC Material 334. Comparison packages cannot cross MAC Specs. By following this process, you will not end up with some samples in the same package under 234 and some under 334.

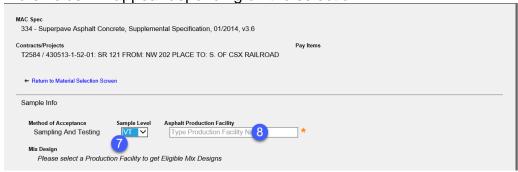
5. Pay item selection is **OPTIONAL** and multi-select. If a sample represents more than one pay item, you can select more than one entry. Do not select a pay item if the contract is Lump Sum, Design Build or LAP.

Once you have input project and material, the system will know which login screen to display. When that happens, it will add the Continue to Sample Information Screen option to this dialog box.



6. Select the Continue to Sample Information Screen to see the rest of the sample login screen.

The Sample Info portion will appear with only the Sample Level field. As selections are made, more fields will appear depending on the selection.



7. Select the appropriate Sample Level to reveal more fields.

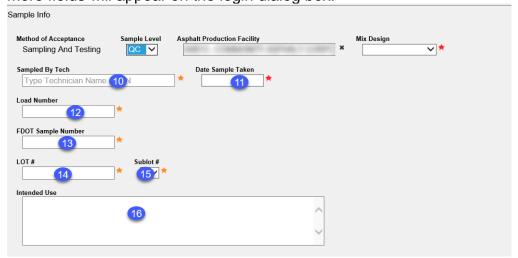
Asphalt MAC Spec do not have categories so the category field will not appear.

8. Enter the production facility number or description in the Asphalt Production Facility field and select it from the returned list.

Now that a production facility has been selected, the mix design field displays. It filters on the entries for the selected production facility in the asphalt plant assignment table. Asphalt samples do not allow for the use of a mix design that is not assigned to the production facility.

9. Select the appropriate mix design for the sample from the drop down list.

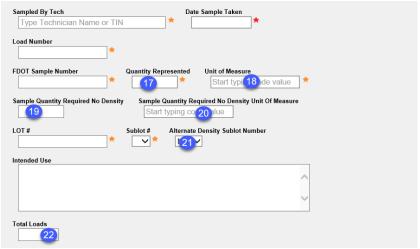
More fields will appear on the login dialog box.



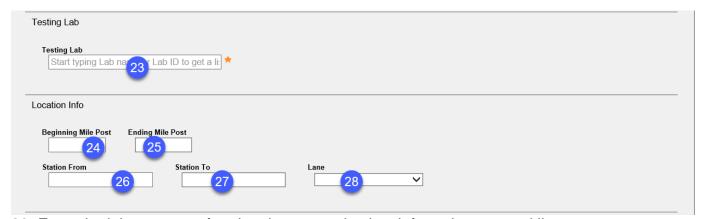
- 10. Enter the name or TIN of the technician who took the sample and select the appropriate entry from the returned list.
- 11. Enter the date the sample was taken or select it from the calendar.
- 12. Enter the load number the sample was taken from.
- 13. Enter the FDOT Sample Number.
- 14. Enter the LOT number.
- 15. Select the sublot number from the drop down list.
- Enter the intended use in the Intended Use text box.

Additional fields for VT samples

These fields only appear on the VT sample. If you are entering a QC sample, skip to field #23 below.



- 17. Enter the Total Tonnage for the Lot.
- 18. Select "Ton(s)" for Asphalt Samples.
- 19. Enter the Tonnage for the Lot not requiring Density.
- 20. Select "Ton(s)" for Asphalt Samples.
- 21. If an alternate Sublot is used for density, you will select the alternate Sublot for the drop down.
- 22. If the total loads are known, then enter the total loads for the Lot.



- 23. Enter the laboratory performing the test and select it from the returned list.
- 24. Enter the beginning mile post for the location of the area represented by the sample.
- 25. Enter the ending mile post of the location of the area represented by the sample.
- 26. Enter the beginning station location of the area represented by the sample in the Station From field.
- 27. Enter the ending station location of the area represented by the sample in the Station To field.
- 28. Select the appropriate lane(s) location of the area represented by the sample.



- 29. Enter the name of the sample contact person in the Contact Name field. This may or may not be the same person as the sampler. It is a person the laboratory can call or email if there are questions about the sample.
- 30. Enter either the Cell Phone # or Office Phone # in the appropriate field. Only one is required. As soon as one is entered, the other required field designator disappears. Both can be provided for informational purposes.
- 31. Enter the email address of the contact person in the Email field. You will receive an error message if the information is not formatted properly. You will not receive an error message if you type it incorrectly, but it is formatted correctly.



32. Save & Submit – select Save if you are not ready send the sample for testing and want to save the data you have entered so far. Select Submit if you are ready to send the sample for testing. If you select Save, the sample will be designated as Logged and will need to be Submitted for Testing in order for the test results to be entered on the lab tests.

NOTE: DO NOT create a VT sample to represent Visually Inspected LOTs. This is designated as part of the Comparison Package in an Incomplete Package (<u>Terminated Lots, Incomplete Lots, Visual Inspection, Lot Closed Due to Time</u>). Creating a VT generates inaccurate MC Review findings as the required tests must be designated as Not Performed. There were no tests performed on a visual lot so designating the tests as Not Performed is incorrect.

Sample Receipt

Asphalt samples are auto-received. If the sample is for binder or other related materials, the instructions for receiving samples can be found in the <u>Project User Manual Chapter 5</u>. These instructions can also be used when an asphalt sample needs to be routed to another lab. For example, the originating lab has an equipment breakdown and needs to route the sample that was auto-received to another lab.

Result Entry

The instructions as shown in the <u>Project Sample User Manual</u> do not need any additional instructions for asphalt except for the following:

Special Consideration for Asphalt QC samples and No Density Required

If the entire LOT is non-density, select the Test Not Performed [No Density Required] option for FM 1-T 166 Gmb – Roadway on all Sublots for the QC Sample levels.

Special Consideration for Asphalt VT samples and No Density Required

If the entire LOT is non-density, select the Test Not Performed [No Density Required] option for FM 1-T 166 Gmb – Roadway on all Sublots for the QC and VT Sample levels.

If the Verification Sublot falls on a Sublot with density, the VT sample would show density testing in the test definition FM 1-T 166 Gmb - Roadway.

However, if the LOT has density and the Verification Sublot falls on a Sublot with non-density, (meaning the QC original sample has no density test results), select the alternate Density Sublot on the sample login screen (field 21 in these instructions). On the test result screen, enter the density data for the alternate sublot on the VT Sample test definition FM 1-T 166 Gmb - Roadway.

Later, when the comparison package is created, MAC uses this information to connect the VT density results to the QC density test results on a different sample than the original sample QC sample for the Composite Pay Factor Calculations.

Sample and Test Data Review and Submitting Samples for FDOT Verification

The instructions as shown in the <u>Project Sample User Manual</u> do not need any additional instructions for asphalt.

Sample Finalization

NOTE: You must be in system roles to perform sample finalization. Select the "No Company, I'll use my System Roles option.

The PA or his delegate must finalize all project samples that are not auto-finalized. In some districts, the PA's delegate may be the Asphalt Plant VT or the Resident Asphalt Specialist. If you are not sure who the PA's delegate is, contact the local District Application Coordinator. The instructions as shown in the Project Sample User Manual do not need any additional instructions for asphalt except the PA or his delegate should ensure that the QC sample that is designated as the alternate density sublot has density test results and is not indicated as Test Not Performed, No Density Required. If a VT sample has been created for a paper lot, have the sample deleted and create a visual inspection (paper lot) comparison package.

Comparison Packages

NOTE: You must be in system roles to create comparison packages. Select the "No Company, I'll use my System Roles option.

When do you create an asphalt comparison package?

 VT does not test until all QC testing is complete. Create the comparison package as soon as the VT sample is finalized.

Creating a Comparison Package



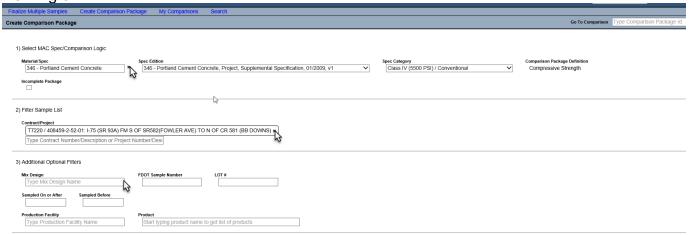
- 1. Select the Samples menu option.
- 2. Select the Closeout Samples sub menu option.

You will be navigated to the Comparison Package screen.

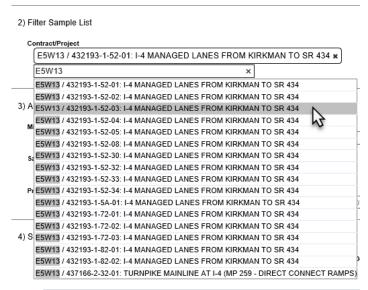


3. Select the Create Comparison Package option to create a new comparison package.

MAC will populate the comparison package criteria from the last sample you finalized. This is convenient if you finalize similar samples and then move to the comparison package stage to complete the sample life cycle. If you are creating comparison packages for a material you did not just finalize, you will have to alter the information to fit the material you are currently working on.



4. If the populated information is incorrect, select the x by the field (like Material/Spec) to remove the default and select something else.



- 5. Asphalt lots must be within the same project.
- 6. Additional filters can be designated in the Additional Optional Filters section.

For asphalt samples, the information needed is:

- Contract Spec and Workbook (i.e., 334 1.x 01/2009; 337 2.x)
- Type of Comparison
 - QC-VT
 - IV-PCS check with your local DAC to see if there is a delegate for the PA for these samples
- Lot Number

MAC auto creates asphalt comparison packages only based on this information. The auto packaging:

- Looks for duplicates only on the verified sublot
- Looks for 0-3 associated samples
- Requires that the mix design is the same for all samples in the package

Run Compare on Comparison Package

Update Comparison Package

7.

- a. Select Create Package to designate the samples and save the comparison package. You will have to select the Run Compare on Comparison Package later.

 OR
- b. Select Create Package and Run Compare if you want to save the package and run the comparison now.

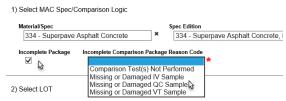
You will receive a message that the comparison package was successfully created. If you selected Create Package and Run Compare, the comparison package status will be updated. In this example, the original sample and verification samples compare within the comparison logic criteria so the comparison status is updated to Compares.

Terminated Lots, Incomplete Lots, Visual Inspection, Lot Closed Due to Time

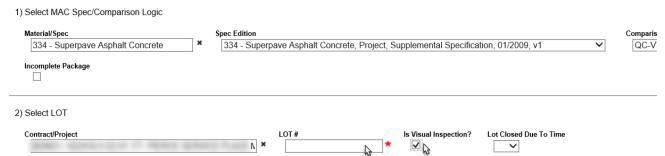
1. Follow the steps described above to create the comparison package.



2. If a Lot is terminated due to QC test failures (see 334-5.4.4) select the Lot Terminated option on the Incomplete Package.



3. Incomplete Lots are Lots where a sample is missing or damaged. When selected, options are available to indicate the reason. Select the reason why the comparison package is incomplete and comparison cannot be performed.

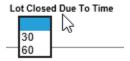


4. Visual Inspection LOTs are LOTs under 2000 Tons that are accepted by Visual inspection (see 334-5.1.2). These are also known as Paper Lots. When the Is Visual Inspection? indicator is selected, the Lot number field becomes a text input to manually enter the Lot number. Enter the LOT number that was visually inspected.



5. In the comments on the comparison package please record the Project ID, Mix Design, and tonnage for the Paper lot.

If a VT sample has been created for a paper lot, have the sample deleted and create a visual inspection (paper lot) comparison package.

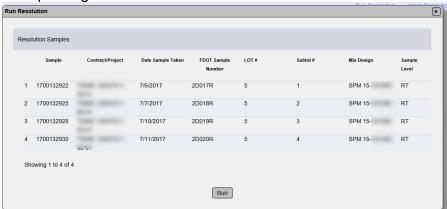


6. Lot Closed Due to Time is a closed LOT that has reached the 30-day or 60-day time restriction (see 334-5). Indicate that the LOT was closed due to time by selecting either 30 or 60.

Adding Resolution to a Comparison Package that Does Not Compare

1. On the comparison package screen that requires resolution, select the Run Resolution option.

A Run Resolution dialog box will appear. Like the comparison, the resolution samples are auto packaged.



2. Select the Run option to add the resolution samples to the comparison package. MAC will determine the resolution status.

The Resolution status will be updated by MAC.

Composite Pay Factor

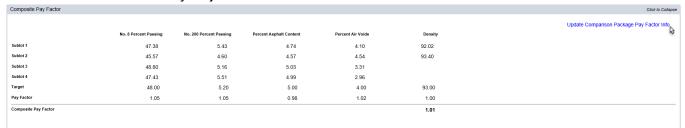
The Composite Pay Factor tab displays all the data used to determine the Composite Pay Factor (CPF) for the lot.



Click on the Composite Pay Factor tab to expand it.

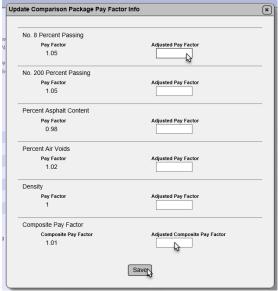
- Master Production failures are highlighted in bold, red font
- When Resolution data is used, the QC data will be crossed out
- Individual Pay Factors and CPFs below 0.90 will be highlighted in bold, red font

The CPF can be manually adjusted.

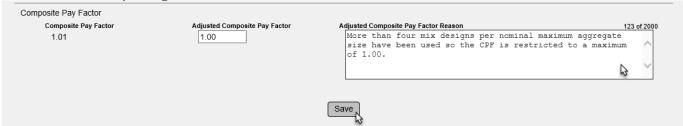


2. Click on the Update Comparison Package Pay Factor Info option.

An Update Comparison Package Pay Factor Info dialog box will appear.



- 3. Each individual pay factor can be adjusted.
- 4. The overall CPF can be adjusted.
- a. If the CPF is adjusted, an Adjusted Composite Pay Factor Reason field will appear. Enter the reason for adjusting the overall CPF.



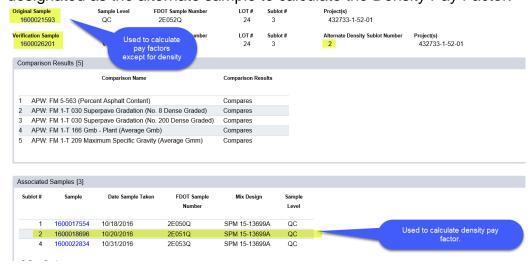
5. Select Save to save the adjustment(s).

Composite Pay Factor						
						Update Compa
	No. 8 Percent Passing	No. 200 Percent Passing	Percent Asphalt Content	Percent Air Voids	Density	
Sublot 1	47.38	5.43	4.74	4.10	92.02	
Sublot 2	45.57	4.60	4.57	4.54	93.40	
Sublot 3	48.80	5.16	5.03	3.31		
Sublot 4	47.43	5.51	4.99	2.96		
Target	48.00	5.20	5.00	4.00	93.00	
Pay Factor	1.05 1.00	1.05	0.98	1.02	1.00	
Composite Pay Factor					1.01 1.00	
Override Reason						
More than four mix designs per nominal maximum aggregate size have been used so the CPF is restricted to a maximum of 1.00.						

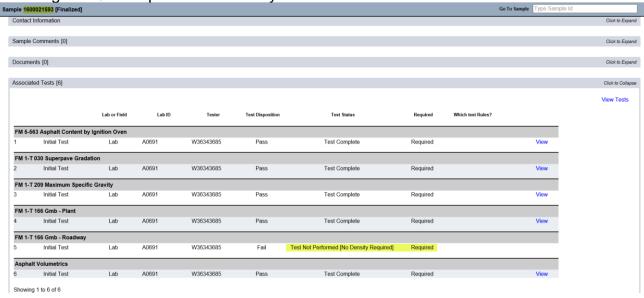
- If Individual Pay Factors are adjusted, the CPF will automatically recalculate unless the CPF is adjusted as well
- Manually adjusted Individual Pay Factors and CPFs are displayed with the original value crossed out and the adjusted value shown
- Comments are displayed at the bottom of the tab

When QC and VT designate that there is No Density required on all lots, the Density Pay Factor is defaulted to 1.00.

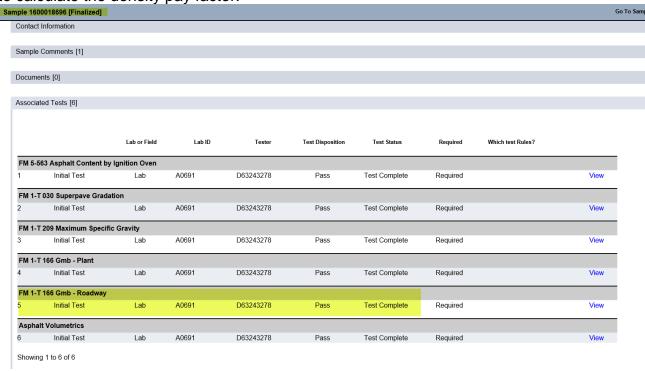
When VT has indicated an Alternate Density Sublot on the Login Screen and entered the density test results on the VT sample, MAC uses the QC density results on the sample designated as the alternate sample to calculate the Density Pay Factor.



The Original QC sample has no density results:



MAC uses density results from the QC Sample designated as alternate density sublot instead to calculate the density pay factor.



Errors will occur if the alternate density QC sample is designated as Test Not Performed, No Density Required.